

**What is Claimed Is:**

- 1            1. In a network switch comprising a control point and a  
2        \ plurality of network processors, a method comprising:  
3            (a) receiving data frames from a network; and  
4            (b) performing logical bridging of data frames destined  
5        for or originating from said control point in a network processor  
6        directly connected to said control point.
  
- 1            2. The method of claim 1, said step (b) comprising:  
2            (c) determining whether said data frame is destined for  
3        said control point; and  
4            (d) sending said data frame to said network processor  
5        directly connected to said control point when said step (c) indicates  
6        that said data frame is destined for said control point.
  
- 1            3. The method of claim 2, said step (c) comprising:  
2            (e) looking up a destination address in said frame in a  
3        media access control (MAC) address database;  
4            (f) sending said data frame to a logical router when said  
5        look-up determines that said data frame requires processing by a  
6        logical router;  
7            (g) looking up a destination address in a routing table in  
8        said logical router; and  
9            (h) sending said frame to said network processor directly

10 connected to said control point when said look-up determines that  
11 said frame is destined for said control point.

1           4. The method of claim 3, further comprising:  
2 setting a bit in a frame header appended to said frame to indicate  
3 that said frame is destined for said control point.

1           5. The method of claim 1, said step (b) comprising:  
2 learning a source MAC address in said frame in a MAC  
3 address database; and  
4 sending said frame to said control point.

1           6. The method of claim 1, said step (b) comprising:  
2 looking up a destination address in a frame originating  
3 from said control point in a MAC address database; and  
4 forwarding said frame to a target network processor and  
5 port found in said look-up.

1           7. A network switch comprising:  
2 a control point;  
3 a plurality of network processors;  
4 said plurality of network processors programmed with  
5 logical bridging and logical routing functions;  
6 wherein a network processor directly connected to said  
7 control point performs logical bridging functions needed by said

8 control point.

1        8. The network switch of claim 7, wherein said logical  
2 bridging and logical routing functions determine that an incoming  
3 data frame to one of said plurality of networks processors is destined  
4 for said control point and send said data frame to said network  
5 processor directly connected to said control point.

1        9. The network switch of claim 8, wherein said logical  
2 bridging function in said network processor directly connected to said  
3 control point learns a source address in said frame in a MAC address  
4 database.

1        10. The network switch of claim 9, wherein said logical  
2 bridging function in said network processor directly connected to said  
3 control point receives a frame originating from said control point,  
4 looks up said learned source address, and forwards said frame  
5 originating from said control point to a target network processor  
6 corresponding to said learned source address.

1        11. A computer-readable medium storing computer-  
2 executable instructions, said instructions when executed by  
3 processors in a network switch comprising a control point and a  
4 plurality of network processors, implementing a method comprising:  
5              (a) receiving data frames from a network; and

6                             (b) performing logical bridging of data frames destined  
7 for or originating from said control point in a network processor  
8 directly connected to said control point.

1                 12. The computer-readable medium of claim 11, said step (b)  
2 comprising:

3                             (c) determining whether said data frame is destined for  
4 said control point; and

5                             (d) sending said data frame to said network processor  
6 directly connected to said control point when said step (c) indicates  
7 that said data frame is destined for said control point.

1                 13. The computer-readable medium of claim 12, said step  
2 (c) comprising:

3                             (e) looking up a destination address in said frame in a  
4 media access control (MAC) address database;

5                             (f) sending said data frame to a logical router when said  
6 look-up determines that said data frame requires processing by a  
7 logical router;

8                             (g) looking up a destination address in a routing table in  
9 said logical router; and

10                           (h) sending said frame to said network processor directly  
11 connected to said control point when said look-up determines that  
12 said frame is destined for said control point.

1           14. The computer-readable medium of claim 13, said  
2 method further comprising:

3                 setting a bit in a frame header appended to said frame to  
4 indicate that said frame is destined for said control point.

1           15. The computer-readable medium of claim 11, said step  
2 (b) comprising:

3                 learning a source MAC address in said frame in a MAC  
4 address database; and

5                 sending said frame to said control point.

1           16. The computer-readable medium of claim 11, said step (b)  
2 comprising:

3                 looking up a destination address in a frame originating  
4 from said control point in a MAC address database; and

5                 forwarding said frame to a target network processor and  
6 port found in said look-up.